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ABSTRACT

This paper reports on activities undertaken to disseminate Student Team Learning (STL) processes and curriculum materials in schools and districts during fiscal year 1982. It also presents the results of a survey of people and institutions who ordered STL curriculum materials from the Center for the Study of Social Organization of Schools during 1980 and 1981. Part 1 describes the STL dissemination strategy. Part 2 describes distribution patterns of STL awareness and curriculum materials by state level, district level, state department level, and university level. Part 3 presents an analysis of a mail survey of teachers, principals, and educators who ordered STL materials in 1980-81. The report contains nine tables as well as the teacher, principal, and educator questionnaires. (JM)

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Center for Social Organization of Schools

Report No. 335
March 1983

STUDENT TEAM LEARNING DISSEMINATION AND PATTERNS OF USE IN SCHOOLS

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The Johns Hopkins University

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The Center

The Center for Social Organization of Schools has two primary objectives: to develop a scientific knowledge of how schools affect their students, and to use this knowledge to develop better school practices and organization.

The Center works through three research programs to achieve its objectives. The School Organization Program investigates how school and classroom organization affects student learning and other outcomes. Current studies focus on parental involvement, microcomputers, use of time in schools, cooperative learning, and other organizational factors. The Education and Work Program examines the relationship between schooling and students' later-life occupational and educational success. Current projects include studies of the competencies required in the workplace, the sources of training and experience that lead to employment, college students' major field choices, and employment of urban minority youth. The Schools and Delinquency Program researches the problem of crime, violence, vandalism, and disorder in schools and the role that schools play in delinquency. Ongoing studies address the need to develop a strong theory of delinquent behavior while examining school effects on delinquency and evaluating delinquency prevention programs in and outside of schools.

The Center also supports a Fellowships in Education Research program that provides opportunities for talented young researchers to conduct and publish significant research and encourages the participation of women and minorities in research and education.

This report, prepared by the School Organization Program, describes activities conducted to disseminate Student Team Learning processes to schools in FY82, and analyzes the patterns of use of Student Team Learning in schools based on survey responses of 439 teachers.

Abstract

The research and development of Student Team Learning, a set of classroom instructional processes, has been a continuing project of CSOS since 1970. In 1976, CSOS began disseminating the processes and prototype curriculum materials to schools.

This paper describes the dissemination activities conducted during FY82 and analyzes the patterns of distribution of Student Team Learning materials in schools and districts during that period. It also presents the results of a survey of teachers who ordered STL materials in 1980-81. The survey examines the use of STL by grade level, the kind of process used, subject area, type of materials, and so on. Over 300 teachers provided written comments about their experiences with using Student Team Learning.

Student Team Learning Dissemination
and Patterns of Use in Schools

This paper reports on the activities undertaken to disseminate Student Team Learning processes and curriculum materials, and the patterns of distribution of the STL materials in schools and districts, during FY82 (December 1, 1981 through November 30, 1982). It also presents the results of a survey of people and institutions who ordered STL curriculum materials from the Center during 1980 and 1981.

Dissemination of Student Team Learning has been conducted by CSOS since 1978, and the general approach has been deliberately eclectic, primarily due to the nature of the Student Team Learning processes themselves. Because they are general instructional methods that are appropriate in various subject areas and in most grade levels, no one subject or school type (elementary, secondary) received concentration. Because of the diverse effects of the processes (improved achievement, better social and race relations, increased self-esteem, and so on), no one area of effect can be claimed as the primary reason for use. And because of the facilitating elements built into the processes (teacher manual, filmstrip, structured training workshop), and the specificity of the methods, teachers can use the methods with little or no assistance from CSOS. Thus, in disseminating STL, no one approach stands out as more promising than a variety of others, and the Center has followed a deliberately eclectic strategy, which is described in Part I of this report.

Part II describes the patterns of distribution of STL awareness and curriculum materials in FY82. The amount of materials disseminated provides some indication of the amount of school and district use, and the types

of materials distributed provide some indication of use by subject area and grade level. Part II also describes patterns of distribution by state, district level, state department level, and university level.

Part III presents analyses of a mail survey of people who ordered STL materials in 1980-81. Questionnaires were mailed to three categories--teachers, principals, and educators. The purpose of the teacher questionnaire was to determine if the teachers who ordered STL materials were using STL, to examine how they used STL and the problems they encountered and benefits they found, and to identify teachers who were using the processes well who would consent to classroom visits from other teachers. The primary purposes of the principal and educator questionnaire were to (1) have them refer teachers they knew who were using STL, and (2) find out how they used the STL materials that they ordered.

I. Dissemination Activities

Major dissemination activities were conducted in FY82 in conjunction with the National Diffusion Network, Race Desegregation Assistance Centers, ESAA projects, educational laboratories, the Seattle, WA Center for Law and Justice, and the Maryland and Pennsylvania State Departments of Education.

National Diffusion Network Division (NDND). Student Team Learning is approved by the Joint Dissemination Review Panel and is funded by the NDND to work with state facilitators to provide awareness presentations and teacher treaining workshops to secure use of STL in schools nationwide.

Race Desegregation Assistance Centers (RDAC's). This national network of Centers works with school districts on problems of desegregation, and the Centers offer Student Team Learning as part of their assistance activities. RDAC's that use STL extensively in their work with school districts include

the Mid-Atlantic RDAC, University of Miami RDAC, Mid-Atlantic Appalachian RDAC, Pittsburgh RDAC and Kansas RDAC. These RDAC's have personnel trained in STL.

ESAA. In FY82, projects funded by the Emergency School Assistance Act to help desegregating school districts continued to initiate and maintain the use of Student Team Learning processes in schools for the purpose of improving race relations.

Educational Laboratories. The network of regional laboratories funded by NIE assisted with the dissemination of STL in their regions. The Mid-Continent Regional Laboratory has incorporated STL into its program of school improvement which it conducts for school districts. Research for Better Schools and Southeastern Educational Development Laboratory included STL in regional Title I (Chapter I) conferences that they coordinated.

Center for Law and Justice. STL is being used by the Center for Law and Justice in Seattle as part of a major effort to prevent juvenile delinquency. STL is one of the school components of the project and its purpose is to provide academic and social success for low-achieving students to strengthen their commitment to the school and lower their likelihood of becoming delinquent. The project is being conducted in sites in many areas of the country (Bangor, ME; Reading, PA; Waterbury, CT; West Palm Beach, FL, etc.)

State Departments of Education. The Pennsylvania and Maryland state departments of education are incorporating STL into major school improvement efforts. The Pennsylvania effort is its Statewide School Improvement Program (SIP) and the Maryland effort is its School Improvement through Instructional Processes (SITIP) program. In Pennsylvania, personnel in the state department Bureau of Equal Educational Opportunity have been trained to provide STL

training in desegregated school districts. In Maryland, the SITIP program introduced STL to all school districts and provided funding for training of teachers and preparation of materials. This state department effort includes implementation and impact evaluation, with technical assistance being provided by an outside agency, Research for Better Schools (RBS).

Other Dissemination Activities. Other FY82 dissemination activities included promoting the use of STL by a Teacher Corps project in Omaha, Nebraska and an Upward Bound project in Connecticut. In addition, the program continued its general dissemination through written publications and conference presentations. Publications include Cooperative Learning: Student Teams, a book in the NEA Professional Library Series; an article about STL accepted for publication by Knowledge; and publication of Vol. 3 No. 1 of the STL Newsletter, distributed to over 5000 school practitioners. Also, an article about STL has been prepared, on request, for the Middle School Journal, and STL has been included as Module 8 in the inservice program book by Brookover et al., Creating Effective Schools. Conference presentations of STL were made for the PA Association of Middle Schools, the PA Science Teachers' Association, the International Reading Association, the International Association for the Study of Cooperation in Education, a Basic Skills Conference sponsored by the Wisconsin Research Center, an Effective Schools Conference sponsored by the Oregon Research Center, and others. Also, the Hopkins University workshop for certified trainers was conducted.

As part of its dissemination activities, the STL project provides an informational brochure at no cost. During FY82, almost 3000 copies of this brochure were requested by teachers, administrators, and university-college personnel. Approximately 30 percent of those requesting brochures wanted them in order to share information about STL with colleagues or to hand out in informational conferences they were conducting about STL.

Awareness, Training, and Follow-up Workshops

The primary method by which STL reaches the point of teacher use is through, first, the provision of awareness activities that create teacher and administrator interest; and second, the provision of teacher training workshops that prepare teachers to use the processes. Follow-up activities are then conducted.

During FY82, project personnel and certified trainers conducted approximately 24 awareness sessions, 43 teacher training workshops, and 21 follow-up workshops. These numbers are approximate due to the difficulty of documenting all certified trainer activity. The following is a month-by-month report of documented activity in FY82.

Dec. 1981

Beatrice, Nebraska--Follow-up, training (certified trainer)
Maryland State Dept.--Follow-up (SITIP Project)
Richmond, VA--Training
Marquette, Grand Rapids, Southfield and Grayling, Michigan--Awareness
Educational Improvement Center South, New Jersey--Awareness
Seattle, Washington--Follow-up, training
Wilmington, Delaware--Follow-up, training
Philadelphia, Pennsylvania--Awareness (certified trainer)

Jan. 1982

Norfolk, Virginia--Training and follow-up
Philadelphia, PA--Awareness (Title I)
Orlando, Florida--Awareness
Atlanta, Georgia--Statewide awareness conference
Baltimore County, Maryland--Follow-up
Austin, Texas--Awareness (Title I)
Howard County, Maryland--Training
Scotch Plains, New Jersey--Training
Washington, D.C.--Awareness (certified trainer)

Feb. 1982

Ocean City, Maryland--Follow-up (SITIP)
Wilmington, Delaware--Training
Seattle, Washington--Follow-up
Baltimore City, Maryland--Training
Rapid City, South Dakota--Training

Washington, D.C.--Awareness (Title I)
Stanley County Schools, North Carolina--Training
Charlotte, North Carolina--Training
Henderson, Tennessee--Training (certified trainer)

March 1982

Rockingham, North Carolina--Training
Monroe, North Carolina--Training
Baltimore County, Maryland--Training
Ocean City, Maryland--Follow-up (SITIP)
Charleston, South Carolina--National awareness conference--certified trainer
St. Mary's County, Maryland--Follow-up

April 1982

Wilmington, Delaware--Follow-up, training
Hagerstown, Maryland--Follow-up (SITIP)
Baltimore City, Maryland--Follow-up (SITIP)
Howard County, Maryland--Follow-up (SITIP)
Washington County, Maryland--Follow-up (SITIP)
Wilmington, Delaware--Training (certified trainer)

May 1982

Wayne County, Michigan--Awareness (certified trainer)
Baltimore, Maryland--JHU Certified Trainers Workshop
Worchester County, Maryland--Follow-up (SITIP)
Indianapolis, Indiana--Statewide awareness conference
Brookland, New Jersey--Awareness
Marshall, Minnesota--Training of certified trainers
Chicago, Illinois--Awareness (Urban Education Conference)
Wesleyan University, Connecticut--Training (certified trainer)

June 1982

Nazareth, Pennsylvania--Training
Mount Vernon, Ohio--Training
Newport News, Virginia--Training

July 1982

New Haven, Connecticut--Training

August 1982

Lexington, Kentucky--Awareness
Kanawha County, West Virginia--Awareness (certified trainer)
Charles County, Maryland--Follow-up (SITIP)
Wheaton, Minnesota--Training
Calvert County, Maryland--Follow-up (SITIP)

Lawrenceberg, Indiana--Training
Milwaukee, Wisconsin--Training
DeSoto, Kansas--Training
Memphis, Tennessee--Training (certified trainer)
Oakland, Tennessee--Awareness (certified trainer)

September 1982

Williamsburg, Virginia--Awareness
Front Royal, Virginia--Training
Trenton, New Jersey--Awareness, training
Cecil County, Maryland--Follow-up (SITIP)

October 1982

Memphis, Tennessee--Training (certified trainer)
Somerville, Tennessee--Training (certified trainer)
Lancaster, Pennsylvania--Training (certified trainer)
Detroit, Michigan--Awareness, training (certified trainer)
Williamsburg, Virginia--Training
Richmond, Virginia--Training
Charles County, Maryland--Follow-up (SITIP)
Chicago, Illinois--Awareness (Effective Schools Conference) (certified trainer)
Kearney, Nebraska--Training
Orlando, Florida--Awareness (Middle School Conference) (certified trainer)

November 1982

Portland, Maine--Training, follow-up
Boston, Massachusetts--Training
Toronto, Canada--Training
Stanley County Schools, North Carolina--Follow-up (certified trainer)
Harrisburg, Pennsylvania--Training (certified trainer)
Memphis, Tennessee--Training (certified trainer)

II. STL Materials Dissemination

Table 1 shows the Student Team Learning materials that were distributed to teachers, schools, districts, and other personnel during FY82. Total requests for materials totalled 628, and these requests were received from

43 states. The total amount of materials distributed equalled 6,924 units, with a "unit" being an STL Teacher's Manual, Starter Kit (manual plus card decks and scoring forms), or set of worksheets.

The number of states from which requests for materials were received indicates the widespread effect of STL dissemination activities. Also, the presence of California, Colorado, and Texas among the ten most active states indicates that STL dissemination activities are effective across the country, not confined to locales in close proximity to the project.

The STL Teacher's Manual and the STL Starter Kit were the most heavily requested materials. Using either of these, individual teachers can adapt their own curriculum materials to use with Student Team Learning processes, and this use may be in almost any subject area at any grade level.

Of the approximately 2000 sets of worksheets and game/quizzes that were requested, over 500 were for use in language arts, almost 900 were for use in mathematics, almost 300 for use in science (including nutrition), and almost 70 for use in history. In general, teachers use these sets of materials as models for adapting their own curriculum materials to use with STL, or use them directly but supplement them with their own classroom materials.

Table 2 describes the sources of the requests for STL materials. This description is based on analyses of information provided on the requests for materials, which is not always specific, but which provides some insight into the purpose of the request and the use of the STL materials.

A continuing argument in the dissemiation field concerns the effectiveness of bottom-up vs. top-down dissemination--the initial discovery and use of an innovation by individual teachers who then spread their use throughout the school and district vs. the initial discovery of an innovation

by district personnel who then introduce it to teachers for their use. Table 2 shows that STL dissemination consists of both bottom-up and top-down efforts.

One hundred forty-five requests for STL materials were from individuals who provided only a street address and no school or institutional affiliation. We assume that most of these are individual teachers who are requesting a manual or starter kit without going through their school purchasing process. Another 265 requests come from the school level--from a specific elementary, middle or junior high, or senior high school, or from a school that cannot be identified according to grade level. These school-level requests come from individual teachers and from school principals.

A total of 119 requests for STL materials came from the district level, and this category of requests contains many orders for a large volume of materials, obviously to be distributed to schools and teachers within the district. Similarly, another 36 requests from federally funded projects (ESAA, Title IV-C, Center for Law and Justice) are primarily for large numbers of materials to be distributed to schools and districts that are participating in the projects.

This dichotomy of requests--teacher and school level vs. district and project level--will provide an opportunity for the STL project to study the actual effects of top-down vs. bottom-up dissemination on classroom and school use of innovations.

A final large category of requests for STL materials is the college-university level. These requests come primarily from individual professors and college bookstores for use in education methodology courses, indicating that STL is gradually becoming institutionalized in preservice teacher training.

III. Survey of Teacher Use of Student Team Learning

In late 1981-early 1982, questionnaires were mailed to teachers, principals, and other educators who had ordered Student Team Learning materials from CSOS during the period of January, 1980-October, 1981. The materials ordered ranged from a single teacher's manual to multiple sets of worksheets and game/quizzes.

Three versions of questionnaires were mailed. Copies of the questionnaires are contained in Appendix A.

The teacher questionnaire was mailed to 775 individuals who had ordered STL materials. They were identified as teachers if their order address consisted of an individual name and a home address (no institution identified) or if the order address consisted of an individual name and a school address.

The principal questionnaire was mailed to 281 orderers of materials for which the order address either identified the person as a principal or consisted only of a school address with no name indicated. The educator questionnaire was mailed to all others (a total of 704), and on these the order address generally identified a school district, university, or a federally-funded project as the recipient.

Thus a total of 1,760 questionnaires were mailed. The primary purposes of the teacher questionnaire were, first, to identify teachers who were using Student Team Learning in their classrooms and using it well, and who would allow other teachers to visit and observe their classrooms; second, to gather some information about how teachers who had ordered STL materials were actually using them--what processes they were using in what subject areas at what grade levels, and what results they were getting. The primary purposes of the principal and the educator questionnaire were, first, to have them provide names of teachers using STL to whom we could send the

teacher questionnaire; second, to find out what the principals and educators did with the materials that they ordered.

Response Rate

The questionnaires were mailed in early December of 1981, and a follow-up was mailed in mid-January of 1982 to those who had not responded. The follow-up consisted of a second mailing of the questionnaire with second request noted on it.

The total principal response was 38, or approximately 13% of the 281 questionnaires mailed. The total educator response was 171 out of 704, or approximately 24%. This low response rate for both groups is mainly due to the insufficiency and ambiguity of the addresses used for the mailing. A large number of the principal questionnaires were addressed to a school, with no individual name. Similarly, a large number of the educator questionnaires were sent to a district or university address, again with no individual name indicated. Many of these questionnaires probably never reached the specific people who had ordered the Student Team Learning materials. (The materials themselves probably did reach these people because they were accompanied by purchase order numbers.)

For the teacher questionnaire, we received 163 responses to the first mailing and another 129 responses to the second request, for a total of 292 out of the 775 mailed, or 37.6%. As noted, the teacher questionnaire was sent to individually-named persons at either a home address or school address. Use of the specific name probably helped to increase the response rate. At the same time, some portion of this group probably were not teachers.

The teacher response was supplemented in two ways. First, a total of 120 teacher questionnaires were sent out to referred teachers--those who had been named on principal and educator questionnaires. Of these, 80 completed and returned the questionnaire. Another 100 teacher questionnaires were distributed in follow-up workshops in Maryland, Delaware, and Nebraska to

teachers who had previously received Student Team Learning training. Sixty-seven of these teachers completed the questionnaire and mailed it in.

The total number of completed teacher questionnaires thus amounts to 439 out of a total of 995 distributed, for a final response rate of 44.1%.

Analyses of Teacher Questionnaires

Analyses of these teacher data do not attempt to identify this sample as representative and draw generalizations about nationwide use of Student Team Learning. These teachers do not include, for the most part, the teachers who are involved in district-level implementations of STL, for which the district ordered materials and distributed them. Nor do they include, for the most part, teachers involved in federally-funded projects (ESAA, Title IV C, etc.) in which the projects ordered materials and distributed them.

The analyses do meet the two objectives of the survey. They identify a number of teachers who are using STL well and who will allow other teachers to observe their classrooms, and they provide information about the general patterns of STL use among a sizeable group of teachers.

Identifying teacher experts. Table 3 shows results of the analyses conducted to identify teacher "experts" in Student Team Learning, based on three survey questions. First, teachers were asked to indicate how they used STL--(1) frequently, (2) once or twice a year for extended periods, or (3) sometimes. Of the 289 teachers who answered this, 110 (38.2%) said frequently, 68 (23.6%) said once or twice a year, and another 110 (38.2%) said sometimes. Because the benefits of STL depend upon it being implemented for a sufficient time period, only teachers who answered 1 or 2 can be placed in the expert user category.

A second question asked teachers to identify their own degree of expertise. Of the 286 teachers who did so, 65 (22.7%) said they were experts, 146 (51.1%)

said they were getting good, 62 (21.7%) said they were beginners, and 13 (4.5%) said they were having problems.

A final question of expertise simply asked if the teacher would allow others to visit his or her classroom to see STL in progress. Of the 300 teachers who reported using STL, 194 (65.0%) said they would be willing to have other teachers visit to see STL.

The responses to these questions were combined to identify 153 teachers who could be designated as expert users of Student Team Learning in their classrooms. This number includes 74 elementary, 51 middle-junior high school, and 28 senior high school teachers. These teachers indicate that they will allow a classroom visit and that they are expert in or getting good at using STL and that they use the processes frequently or one-to-two times a year for four-to-eight week periods.

The identification of those teacher experts allows the team learning project to respond to requests from schools and districts that want to observe STL processes being used in classrooms.

Table 3 also examines the relationships among the three Student Team Learning instructional processes and the three categories of teacher expertise, with the following results:

1) A larger percentage (37.9%) of the teachers use TGT on a "sometimes" basis, as opposed to STAD and Jigsaw. This type of TGT use probably reflects those teachers who occasionally use tournaments in their classrooms but who do not implement the complete TGT process.

2) Over 72 percent using any one of the three processes indicate that they are "expert" or "getting good."

3) A good majority (65%) of the teachers using the processes are agreeable to classroom visits.

Patterns of STL Use. Table 4 provides basic information about teacher patterns of use of STL--which processes they use, in how many classes, in which subject areas, at what grade levels. First, of the 439 respondents, 300 (68.3%) reported that they were using STL, and another 38 (8.7%) said they were planning to use the processes. One hundred eighty-nine (43.1%) reported that they used STL last year. (Of these, 130 used STL last year and this year.)

Processes used. More teachers (230) reported using TGT than STAD (107) and Jigsaw (44) combined. TGT is the oldest of the team learning processes, and teachers and students enjoy the tournament aspect of the technique. Also, the scoring system in TGT, which allows low achievers to contribute as much to the team as high achievers, is easily understood, whereas the improvement points system used in STAD and Jigsaw is not as conceptually clear to students and is difficult for the teacher to explain. By using a simpler scoring system with these processes, which the Center has recently initiated, STAD and Jigsaw use should increase in proportion to TGT use.

Also, less use of Jigsaw can be explained by the fact that model materials for using the process have only recently been developed. Previously, teachers not only had to develop all their own materials for Jigsaw, but also had no sample materials to work from.

Number of classes. This question primarily reflects STL use at the middle-junior high and senior high levels and in departmentalized elementary grades. One hundred sixty-five teachers (37.6% of the total surveyed) use STL in two, three, or more classes. This represents 60.9% of the teachers who use STL.

This large amount of multiple usage implies that the teachers find the processes effective enough that they expand their use instead of limiting it

to one class. Also, although one of the often-voiced problems with STL is the amount of teacher time required in its use, most teachers seem to overcome that problem and extend the use. (The problem of teacher time is also examined later in this report, where we find that surprisingly few teachers mention it as a problem.)

Another implication of teacher use with more than one class is that it magnifies the potential impact of the processes on students, as one teacher may be using STL with 30 to 90 or more students during the year.

Subject areas. The greatest use of STL is in math (141, or 32.1% of the teachers surveyed) and language arts (134, or 30.5%), the basic school curriculum areas. Significant use also occurs in social studies and science, and some teachers use STL in reading, spelling, foreign language, and other subjects. This variety of subject area use reflects the fact that STL consists of instructional processes that can be applied by teachers without dependence upon curriculum materials produced by the Center--no materials were available for these teachers in social studies, elementary science, reading, spelling, foreign language, or senior high school math and English. At the same time, the extensive use in math and language arts, for which the Center offers model curriculum materials, indicates that the model materials can be important in helping teachers implement STL.

Grade levels. Table 4 also shows teacher use of STL by elementary, middle-junior high, and senior high levels. Over half of the total STL use (51.6%) is at the elementary level, another 31.8% at the middle-junior high level, and 16.6% at the senior high level. However, the reported use within these schools is comparable--that is, of the teachers who responded to the survey, 78.9 percent of the elementary teachers, 78.9 percent of the middle-junior, and 72.3 percent of the senior high teachers reported using STL.

Tables 5, 6, and 7 present information concerning the use of materials by teachers, their indications of whether other teachers in the school are also using STL, and for those teachers who said they were not using STL, their reasons for not using it.

Materials Used. The curriculum materials provided by the Center are intended as models for teachers to adapt their own materials to STL use. However, the materials have undergone extensive development and revision, are entirely appropriate for direct teacher use and, in fact, can be extremely beneficial to some teachers whose own curricula are not objectives-based or well planned. Also, the development of materials for use with STL requires a good amount of teacher time and effort, which can be reduced by use of the Center materials.

In our survey, 117 (36.2%) of the teachers using STL devoted the time and effort to make their own materials. A smaller number (71, or 22%) used the Center materials only. However, another 135 teachers (41.8%) used the Center materials and developed some of their own, generally to supplement the Center materials and to adapt them more completely to their own curricula.

This materials usage supports the Center's decision, made early in the dissemination process, to develop and distribute actual curriculum materials along with the STL processes. These materials do not become the prescribed curriculum for a teacher, but do make the use of Student Team Learning a less arduous task. These figures imply that, if STL materials were unavailable, as many as 63.8 percent of the teachers using STL would not be using the processes.

Table 5 also shows teacher use of materials according to the STL process used. Teachers using the Jigsaw process, for which few Center materials are

available, expectedly indicate a high incidence of developing their own materials. As previously noted, Jigsaw is also the least-used STL process, and the lack of Center model materials no doubt contributes to this.

Other Teachers Using STL in the School. On our survey, teachers were asked to provide the names of other teachers in their school who were using STL. The number named was used to develop four categories--no others (isolated use), 1 or 2 others (some support), 3 or 4 others (supported use), and 5 to 8 others (school-based use). The response was assumed to be "no others" if the teacher responded "none" or "no others" or left the question blank, which may slightly over-estimate the "no others" category.

Table 6 shows that 181 (60.3%) of the teachers using STL are isolated users--the only teacher in the school using the processes. Only 11 teachers (3.7%) report that they are part of a widespread school usage, with another 19 (6.3%) reporting supported use.

The mailing list for the questionnaire influences these percentages. The questionnaire was mailed to teachers who ordered materials from the Center, and thus excludes most teachers who are involved in school-wide use who received their materials from the district or from a federally-funded project. An analysis of the responses from two groups confirms this influence. For those teachers who first received the mailed questionnaire, the isolated use increases to 69.2%. However, for those teachers who received the questionnaires because they were referred by a principal or district person, and those who received the questionnaires during workshops, the rate of isolated use reported is only 16%.

The high incidence of isolated use indicates that these teachers are primarily innovators who have found STL on their own. In their case, use of STL is a teacher-initiated project, not a school- or district-initiated

project. In further studies of STL dissemination, it would be valuable to examine how and whether other teachers in these schools and other schools might be influenced by these innovators to begin using STL. Such a study would help to determine if a "bottom-up" dissemination process actually occurs and, if so, how it takes place.

Reasons for Not Using STL. Teachers who responded to the survey by saying they were not using Student Team Learning were asked to indicate why. Table 7 shows six categories of reasons that were given by 97 teachers. The largest category (35.1%) consists of teachers who are not using STL because they are no longer in the classroom. A few moved into administrative positions, but most simply left teaching.

Other reasons that teachers who ordered materials decided not to use STL included not having enough time (17.5%), didn't want to use it after examining the materials (16.5%), had administrative problems (no paper, no principal support (9.3%)), felt that their low-ability class couldn't do it (8.2%), and other reasons (13.4%).

The reasons given for not using STL provide little indication of changes that could be made in the STL processes or dissemination methods to increase the rate of use.

Benefits and Problems. Of the 439 survey respondents, 333 answered item number eight by commenting on their experiences with using Student Team Learning. These comments were categorized as being statements about benefits or statements about problems, the benefits and problems categories were then specified, and the number of specific benefits and problems mentioned in each response was recorded. Up to four benefits were recorded for each response (first-named, second-named, etc.) and up to three problems were recorded (no response named more than three problems).

Table 8 shows the number of specific benefits and problems noted by

teachers. Many teachers named more than one benefit and/or named the same benefit more than one time. The most often named and repeated benefit (411 mentions) was simply an expression of liking and enjoying STL (e.g., I think it's wonderful, my students really love this, I wish I'd done this last year, etc.). Similarly, the most often named and repeated problem (65 mentions) was simply an expression of vague discontent (e.g., it didn't work as well as I thought it would, some students didn't respond, I could have used some training, etc.).

The most-mentioned more specific benefits were increased student achievement (96 times), improved social interaction (54) and increased student motivation (46). The most-mentioned more specific problems were problems with materials (23 times) and too much time required (21 times).

Of the 333 teachers who commented, 35 named no benefits in their comments, while 225 named no problems.

Appendix B contains selected examples of the comments provided by teachers in response to survey item number eight.

STL Use in Desegregated Schools. Because STL improves social relations among students, including relations among students of different races, it is especially suited for use in desegregated schools. Table 9 shows some comparisons of use in desegregated and non-desegregated schools. A school was considered desegregated if the minority enrollment (black and/or Hispanic) was between eleven and ninety percent; nondesegregated if the minority enrollment was 0-10 percent or 91-100 percent.

The percent of minority enrollment of the surveyed schools was compiled from Office of Civil Rights data[1] as of 1978-79, which should accurately reflect the status of our schools in 1980-81. The degree of

[1] Directory of Elementary and Secondary School Districts, and Schools in Selected School Districts: School Year 1978-1979. U.S. Department of Education, Office of Civil Rights.

school desegregation was found for the schools of 288 of the teachers who responded to the survey.

Of these 288 respondents, 67 percent (193) were located in desegregated schools and 33 percent (95) were in nondesegregated schools. Of the 193 teachers in desegregated schools, 75.6 percent (146) were using STL, while 62.1 percent (59) of the 95 teachers in nondesegregated schools were using STL. This indicates a slightly higher propensity to use STL, once the materials have been ordered, by teachers in desegregated schools.

Teachers using STL in desegregated schools compared to teachers using STL in nondesegregated schools also showed a higher tendency to have one or more other teachers in the school using STL (34.4 vs. 25.3%). In addition, 18.1 percent (35) of the teachers using STL in desegregated schools specifically mentioned social interaction as a benefit, compared to only 04.2 percent (5) in nondesegregated schools.

A similar percentage of teachers in both sets of schools used the processes correctly and indicated that they were experts or getting good at using STL. However, a larger percentage of teachers in desegregated schools indicated that they would allow other teachers to visit their classrooms (52.3 vs. 43.1 percent).

Summary and Conclusions

The main conclusion that can be drawn from these analyses of the dissemination of STL materials and patterns of use by teachers is that Student Team Learning instructional processes are indeed used at all grade levels in most subject areas, used in desegregated and nondesegregated schools, and the use is nationwide. A large number of teachers implement and use the processes well, while some others do not. Many teachers using STL are doing it on their own, with no support from others in the school.

Our survey sample, however, is biased toward this type of isolated user, since it does not include most teachers involved in district or federally-funded projects.

The teachers who use STL report many more benefits of use than problems. In general, they use the Center-developed materials as models for making their own curriculum materials and to supplement their own materials. . surprisingly large number use STL with more than one class.

As the dissemination of Student Team Learning continues, the body of data that exists and which can be collected about dissemination strategies and district, school, and teacher patterns of use continues to grow, and will provide opportunities to study multiple aspects of the dissemination process and the processes through which schools adopt, implement, and use innovations.

Table 1

Student Team Learning Materials Ordered, December 1, 1981 - November 30, 1982

Total Orders: 628

Total States: 43

Top 10 states by number of orders:

California	- 52	Pennsylvania	- 35
Maryland	- 48	South Carolina	- 28
North Carolina	- 44	Colorado	- 26
Geogia	- 36	Texas	- 22
Virginia	- 36	Ohio	- 19

Types of materials ordered and amounts:

STL Teacher's Manual	3,464
STL Starter Kit	1,472
Filmstrip	133
Elementary lang. arts - 20 objectives	193
Elementary lang. arts - 100 objectives	174
Grades 7-8 language arts	166
Math - grade 2	87
3	83
4	103
5	145
6	154
7	85
8	76
Consumer Math	69
Elementary nutrition	86
Secondary nutrition	61
Life Science	76
Physical Science	67
Algebra	62
Geometry	39
Metrics	61
American History	68
Total amount of materials ordered:	6,924

Table 2

Sources of Requests for STL Materials, FY82

Type of requestor	No. of requests	Percent of total
Individual (no institutional affiliation indicated)	145	23.1%
Elementary school level	68	10.8%
Middle-Jr. High level	72	11.5%
Senior High level	42	6.7%
General school (level not indicated)	83	13.2%
District level	119	19.1%
Federally-funded project	36	5.7%
University-college level	52	8.3%
State Department	7	1.0%
Other	4	0.6%
Total Requests	628	

Table 3

Percentage of STL Users by Schedule of Use, Experience, and Classroom Visitation

	Total Student Team Learning	TGT	STAD	JIGSAW
Schedule of Use (n=289)				
*Frequent	38.2	38.4	54.8	59.5
*1, 2 times/year	23.6	23.6	18.3	16.2
Sometimes	38.2	37.9	26.9	24.3
Experience with STL (n=286)				
*Expert	22.7	27.0	19.4	29.7
*Getting Good	51.0	51.0	55.9	43.2
Having Problems	4.5	3.9	4.3	0.0
Beginner	21.7	18.1	20.4	27.0
* Allow Classroom Visit (n=300)	65.0	63.6	68.2	65.9

*Combined to form "teacher expert" category

Table 4

Student Team Learning Use in Schools

n = 439	This Year	Last Year
Using STL	68.3 (300)	43.1 (189)
Planning to use	8.7 (38)	--
Using TGT	52.4 (230)	34.4 (151)
Using STAD	24.4 (107)	13.2 (58)
Using Jigsaw	10.0 (44)	4.3 (19)
Using in one class	24.1 (106)	13.7 (60)
Using in two classes	13.9 (61)	8.9 (39)
Three or more classes	23.7 (104)	15.7 (69)
Using in math	32.1 (141)	19.6 (86)
lang. arts	30.5 (134)	16.4 (72)
soc. studies	15.7 (69)	9.8 (43)
science	13.7 (60)	8.2 (36)
reading	2.7 (12)	--
spelling	2.1 (9)	--
for. lang.	0.9 (4)	--
other	3.9 (17)	2.1 (9)
Grade level (n=283)		
Elementary	51.6 (146)	47.5 (84)
Middle-Jr. High	31.8 (90)	34.5 (61)
Senior High	16.6 (47)	18.1 (32)

Table 5: Percentage of Teachers Who Make Their Own Materials, Use JHU Materials, or Use Both

Materials Used (n = 323)		Using TGT		Using STAD		Using Jigsaw	
		%	number	%	number	%	number
Made own	36.2 (117)	31.5	(69)	35.7	(35)	50.0	(19)
Used JHU	22.0 (71)	21.0	(46)	15.3	(15)	7.9	(3)
Used both	41.8 (135)	47.5	(104)	49.0	(48)	42.1	(16)

Table 6: Percentage of Teachers Reporting Use by Other Teachers in Their School

No. of others using	%	n
No other (isolated use)	60.3	(181)
1-2 others (some support)	29.7	(89)
3-4 others (supported use)	06.3	(19)
5-8 others (school-based use)	03.7	(11)

Table 7: Percentage of Teachers Reporting Reasons for Nor Using STL

Reason	%	n
Not teaching now	35.1	(34)
No time	17.5	(17)
Don't want to	16.5	(16)
Administrative problems	09.3	(9)
Low-ability students	08.2	(8)
Other	13.4	(13)

Table 8

Benefits and Problems of STL Use
Reported by Teachers

Benefits	Total Times Mentioned (n=621)	
	%	
Like STL, Enjoy Using It	62.7	(411)
Increased Achievement	14.6	(96)
Increased Student Participation	02.1	(14)
Social Interaction	08.2	(54)
Increase Motivation	07.0	(46)

Problems	Total Times Mentioned (n=147)	
	%	
General Problems	44.2	(65)
Materials	15.6	(23)
Students Don't Work Well in Teams	10.2	(15)
Too Much Time Required	14.3	(21)
High Achievers Suffer	07.5	(11)
Too Noisy	08.2	(12)

Table 9

STL Use in Desegregated/Nondesegregated Schools

	Desegregated Schools (n=193)		Nondesgregated Schools (n=95)	
Using STL	75.6	(146)	62.1	(59)
One or more other teachers using	34.4	(66)	25.3	(24)
Social Interaction Benefit	18.1	(35)	04.2	(4)
Use frequently or 1, 2 times/year	46.6	(90)	45.3	(43)
Expert or getting good	53.9	(104)	52.6	(50)
Allow visit	52.3	(101)	43.1	(41)

Appendix A

Teacher, Principal, and Educator Questionnaires

TEACHER QUESTIONNAIRE

1. Are you using Student Team Learning this school year? _____ Yes _____ No

   Do you plan to use Student Team Learning this school year? _____ Yes _____ No → If no, why did you decide not to use Student Team Learning?

   _____

   _____

   _____

   _____

   _____

   _____

   Thank you. Please fold, staple, and return.

   If yes, which process(es)?

   _____ Teams-Games-Tournaments (TGT)

   _____ STAD

   _____ Jigsaw

   With how many classes?

   _____ one class only

   _____ two classes

   _____ more than two classes

   In which subjects?

   _____ math

   _____ language arts

   _____ social studies

   _____ science

   _____ other (please specify)

   _____

   _____

2. Did you use Student Team Learning last year? _____ Yes _____ No

   If yes, which process(es)?

   _____ Teams-Games-Tournaments

   _____ STAD

   _____ Jigsaw

   In which subjects:

   _____ math

   _____ language arts

   _____ social studies

   _____ science

   _____ other

   With how many classes?

   _____ one class only

   _____ two classes

   _____ more than two classes

3. Teachers use Student Team Learning on various schedules. Please check the schedule below that best describes your use during a school year.

   _____ I use it frequently for four-to-eight week periods or more.

   _____ I use it once or twice a year for four-to-eight week periods.

   _____ I use it sometimes but not in any systematic way.

4. How would you describe your experiences with Student Team Learning?

   _____ I'm an expert now--run it smoothly with few problems.

   _____ I'm getting a good handle on it.

   _____ I'm having more problems than I'd like.

   _____ I'm a beginner with high hopes.

5. If your principal approved and you had plenty of advance notice, would you be willing to have other teachers visit your classroom to see Student Team Learning? _____ Yes _____ No

6. Student Team Learning can be used with teacher-made curriculum materials and/or with the Hopkins-prepared curriculum units. What curriculum materials have you used?

   _____Made my own _____ Used Hopkins materials _____ Used both

7. We often don't know who actually uses the materials that are ordered from us. If other teachers in your school are using Student Team Learning, please list their names so we can send them this questionnaire and put them on our mailing list to receive the Student Team Learning Newsletter.

   _____

   _____

   _____

   _____

   _____

8. Please comment as extensively as you wish about your experience with Student Team Learning and its effects in your classroom.

   _____

   _____

   _____

   _____

   _____

Name _____ Phone ( ) _____

School _____ Grade Level(s) Taught: _____

Address _____

City: _____ State: _____ Zip Code: _____

Thank you very much. We will continue to send you the Student Team Learning Newsletter. If you want further information at any time, please write or call (collect) Ruth Carter at (301) 338-8249.

Please fold so that our return address is in the front, staple closed, and mail.

PRINCIPAL QUESTIONNAIRE

Name _____ Phone: _____

School _____

Address _____

City: _____ State: _____ Zip Code: _____

1. How did you first hear about Student Team Learning?

_____

_____

3. Are teachers in your school using Student Team Learning in their classrooms? ____Yes ___ No.

If yes, can you provide their names so we can send them a questionnaire concerning their use of the processes? By interviewing the individual teachers, we can learn more about how they use the processes and how we can help them.

Name	Grade Level

4. If no teachers in your school are using Student Team Learning, why did they decide not to use the curriculum materials that were ordered?

_____

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5. What is your general opinion of the Student Team Learning program? Please respond in as much detail as possible.

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Thank you very much. We will continue to send you the Student Team Learning Newsletter. If you want further information at any time, please write or call (collect) Ruth Carter at (301) 338-8249.

Please fold so that our return address is in the front, staple closed, and mail.

Appendix B

Selected Teacher Comments Concerning Their Use of Student Team Learning

EDUCATOR QUESTIONNAIRE

Name _____ Phone ( ) _____

Title _____

Address _____

City: _____ State: _____ Zip Code: _____

1. How did you first hear about Student Team Learning?

_____

2. Have you attended a Student Team Learning workshop? _____ Yes _____ No

If so, who conducted the workshop?

_____

3. How have you used the Student Team Learning materials that you ordered? Have you taken any action to inform others about Student Team Learning, or to initiate its use in schools?

_____

_____

_____

4. What principals do you know whose schools are using Student Team Learning in your district or elsewhere? (We would like to send them a questionnaire to get further information about how their schools are using Student Team Learning.)

Name	School	Address

5. What specific teachers do you know who are using Student Team Learning in their classrooms? (We would also like to send them a questionnaire to learn more about how they are using the processes and how we can help them.)

Name	School	Address

6. What is your general opinion of the Student Team Learning process and materials? Please respond in as much detail as possible.

_____

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Thank you very much. We will continue to send you the Student Team Learning Newsletter. If you want

Comments from teachers and principals who responded to the Student Team Learning survey.

Charleston, WVA (5th grade): This program has generated a great deal of enthusiasm for the social studies curriculum. There has also been a marked improvement in grades.

Nashville, TN (elementary): STL brought closure to creative methods I had tried. It's the most fantastic, workable set of strategies that our learners/thinkers we teach today need. It's a way of behaving in the classroom for me. It's unbelieveable--the changes that take place among the boys and girls seem unreal. This can be seen in a matter of weeks.

Rockville Centre, NY (3rd grade): I am very pleased with what I see. The children amaze me with their eagerness and ability to conduct their "expert" groups and "team teaching" time--in an orderly, structured way. They are charged up about succeeding for their teams' status. Parents tell me that they (their children) come home with news of team standings, etc. One set of parents is particularly thrilled with this program because their child has always had a motor coordination problem and therefore could never really shine on teams--which is generally part of the gym activities program.

Alva, FL (6th grade): This is my second year using TGT with my 6th grade science students. The overall response has been very favorable (both from parents and students). To date I have given 2 countywide workshops on "peer instruction and team learning" and 1 in-school workshop with positive results.

Topeka, KS (grades 7-8): It has been very successful. Students look forward to our tournaments and watch scores on our classroom wall closely. Their test scores have also improved.

El Paso, TX (grades 10-12): Students are very enthusiastic and so am I. Results are more students participating and apparently making preparations for the matches we hold. Overall averages are better since we started using TGT.

Denver, CO (elementary): Student Team Learning has increased my pupils motivation to learn. They are extremely pleased with peer-tutoring and have a deep sense of belonging. Their grades and self-esteem have risen tremendously. Parents have expressed absolute approval of the program and voiced their wish that all other teachers would take advantage of the program.

Claymont, DE (grade 5): Students who previously gave up found they could be successful and improved after several weeks and were passing, even getting A's and B's when figured by percentage. I found I had to adapt and use exercises from the text for STAD and a modified Jigsaw due to lack of paper. (Sometimes these activities were actually more appropriate.)

Mainsfield, CT (grade 7): Kids love it! Kids learn! There are so many facts and concepts to learn in social studies that we find this a super way to get the information across.

San Jose, CA (high school principal): I think it is one of the most effective techniques to come down the pike in many years. We are all very excited about it and have experienced some impressive results.

Tiptonville, TN (grades 7-8): I have found that the students enjoy working with TGT. I have better attendance, participation and no behavior problems. My lower groups have shown marked improvement.

New Orleans, LA (grade 5): I think Student Team Learning is an exciting method of instruction. My students response to the two methods I have employed has been positive. Students that were considered unmotivated by previous teachers have suddenly bec-me excited about math and social studies. Since I have started using Student Team Learning, my students' achievement has increased dramatically.